# RFC2462 updates

**<draft-ietf-ipv6-rfc2462bis-00.txt>**

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## Summary of status

- Issue tracker
  - URL: https://rt.psg.com/
  - User/Passwd: ietf/ietf
  - Queue: ipv6-2462bis
  - 21 issues so far
    - 18 identified in the previous revision
    - 3 new issues
- Current status
  - 14 resolved
  - 2 need confirmation
  - 5 under discussion

## Resolved issues (1-7/14)

- 264 dead code in the DoS prevention algorithm
- 265 unclear text about a corner case in the inbound NA processing
- 266 unclear text about StoredLifetime
- 267 remove references to site-local
- 268 source address selection issues with regards to deprecated addresses
- 269 semantics of "new communication" wrt a deprecated address
- 270 L=0 and A=1 case

## Resolved issues (8-14/14)

- 271 update security consideration and alignment with SEND
- 273 conflict between 802.11 spec and DAD assumption
- 276 possible (new) DoS
- 279 'not-yet-ready' status of an autoconfigured address to help renumbering
- 280 interface failure upon DAD failure
- 321 (new) preferred lifetime update
- 324 (new) obsolete text in IF ID definition

## Changes that (may) affect implementations

- 265 corner case for inbound NA proc
  - validation check becomes a bit stricter
- 269 semantics of "new communication"
  - response to TCP SYN is okay
  - application's choice must be honored
- 280 disabling interface upon DAD failure
  - now only happens upon duplication of HW based address
- 321 preferred lifetime update
  - always update preferred LT even if valid LT is rejected

## Resolutions need to be checked

- 271 stable storage for autoconfigured addresses
  - new section (5.7) with some considerations
  - perhaps too much, should be a future extension?
- 274 conflict between MLD spec and RFC2462
  - RFC2462: delay before sending DAD NS
  - 2462bis: delay before joining the group

- a bug fix, agreed in the ML
- affect existing implementation, pls check

## Ongoing issues (summary)

- 278 router autoconfiguration
- 275 DAD issues (requirement level, etc)
- 277 semantics of M/O flags
- 281 64-bit interface ID assumption
- 337 (new) DAD can collide for addrs configured by multicast RA

## DAD issues (requirement level, etc)

- Base line
  - we should honor DAD, not DIID
  - separate the issue from "optimistic DAD"
- Proposed change
  - RFC2462: SHOULD do DAD, but MAY omit it
    - if LL is unique and IFID is shared
  - 2462bis: MUST (or SHOULD) do DAD, period.
    - by respecting the above decision
    - for simplicity, avoiding confusion

## M/O flags

- Questions from Ralph Droms in March 2003
  - use RFC 2119 keywords, which keywords?
  - what is "the stateful configuration protocol"?
  - relationship between "stateless" DHCPv6 and the O flag
- Two points to make decisions
  - DHCPv6 was officially published
  - the sense of node-requirements draft
    - implementing DHCPv6 is optional
    - allow admin to turn it on with explaining the effects

## M/O flags: Proposed resolution

- What is "stateful"?
  - it is DHCPv6

- RFC2119 keywords
  - loosen the requirement level for no router case
    - from MUST (2462) to MAY (bis)
  - use SHOULD for the other cases
    - (e.g.), SHOULD perform DHCPv6 with the M flag
- "stateless" DHCPv6 and O flag
  - separate the O flag from stateless DHCPv6

## 64-bit interface ID

- Inconsistency on IFID length among specs
  - RFC2462: IFIDs are link-type specific
  - IPv6 over Ethernet: ditto
  - add-arch: address format defines the length
    - link-local(fe80::/10) => 64 bits
    - global starting with !000 => 64 bits
- Basic assumption
  - do not change other specs on this matter
  - no real problem due to the inconsistency
- Proposed resolution
  - do not change the current def, but add a note on the issue

## Other ongoing issues

- 278 router autoconfiguration
  - allow half-router and half-host configuration?
  - also need to resolve multihome ND?
  - just make a note as a future extension?
- 337 DAD can collide for addrs configured by multicast RA
  - impose a delay before DAD in this case?
  - should be a future extension?

## Future plans

- Separate serious issues from future extensions
  - make a solid consensus on the former
  - make appendices for the latter
    - like Appendix B of RFC2461 (future ext.)
    - clarify the points, and just note them
- Revise the draft around the end of March
- WG last call